

A Cross-Sectional Study on Socio- Demographic, Behavioural & Clinical Profile of Adult Male People Living With HIV/AIDS Attending In A Tertiary Hospital of Kolkata, India

Dr. Trinath Sarkar¹, Dr. Nabarun Karmakar^{2*}, Dr. Aparajita Dasgupta³, Dr. Bibhuti Saha⁴

¹Assistant Professor, Department of Community Medicine, Medical College, Kolkata, 88, College Street; Kolkata-700073, India.

²Assistant Professor, Department of Community Medicine, Tripura Medical College & Dr. BRAM Teaching Hospital, Hapania, Agartala -799014, India.

³Director-Professor, Department of Preventive and Social Medicine, All India Institute of Hygiene and Public Health, Kolkata; 110, Chittaranjan Avenue, Kolkata-700073, India.

⁴Professor and Head of the Department, Department of Tropical Medicine, Calcutta School of Tropical Medicine (CSTM), Kolkata; 108, Chittaranjan Avenue, Kolkata-700073, India.

Original Research Article

*Corresponding author

Dr. Nabarun Karmakar

Article History

Received: 12.03.2018

Accepted: 19.03.2018

Published: 30.03.2018

DOI:

10.36348/sjimps.2018.v04i03.009



Abstract: HIV/AIDS is a serious challenge for the developing as well as the developed world. Globally, 35.0 million (33.2–37.2 million) people were living with HIV at the end of 2013. [1] Although many HIV-infected individuals avoid risky behaviours, still substantial numbers of HIV-infected persons, continue to engage in HIV transmission risk behaviours. To find out the Socio-Demographic, Behavioural characteristics and Clinical profile of People (Males more than 15 years) Living with HIV/AIDS (PLHA). An institutional based cross sectional study was carried out among People (male >15 years) living with HIV /AIDS (PLHA) attending Anti Retro Viral Therapy (ART) Centre of Calcutta School of Tropical Medicine (CSTM) for 12 months from May 2012 to April 2013. A predesigned and pretested schedule was used as study tool to collect required information. Maximum population (40.5%) belong to the age group 31-40 years followed by 24.1% in 41-50 years. Majority had coital debut at the age of 26-30 years (35.9%). First sexual partner among 41.7% was female commercial sex worker; 74.4% participants were not into monogamous relationship. More than half of study population (51.1%) were currently sexually active and 55.36 % of currently sexually active participant consistently used condom. Majority of the study population suffered from tuberculosis (28.2%) followed by candidiasis (24.5%). PLHA should be trained on safe sex strategy, correct and consistent use of condom among themselves & their partner as well as maintaining monogamous relationship. More involvement of Community Care centre to reinforce, care and counselling, support of PLHA against Opportunistic infection will reduce their poor health burden. IEC activities to promote value based lifestyle with reducing vulnerabilities among PLHA and creating a strong network among PLHA will prevent such harmful behaviour.

Keywords: Adult, Condoms, Counselling, India, Safe Sex.

INTRODUCTION

HIV/AIDS is a serious challenge for the developing as well as the developed world. Globally, 35.0 million (33.2–37.2 million) people were living with HIV at the end of 2013. [1]. The Government of India estimated that about 2.40 million Indians are living with HIV (1.93–3.04 million) with an adult prevalence of 0.27% [2]. The most common mode of HIV transmission is through unprotected sex with an infected person, which contributes about 87.4% route of HIV transmission [3].

National AIDS Control Programme provided antiretroviral therapy (ART) along with sustainable prevention interventions such as condom provision and health promotion including counselling services. Until recently, the focus of HIV prevention was largely on people uninfected with HIV and for a long time, the sexual behaviour of HIV-infected persons did not receive any serious attention for a variety of reasons.

Although many HIV-infected individuals avoid risky behaviours, still substantial numbers of HIV-infected persons, continue to engage in HIV transmission risk behaviours [4]. This can also lead

them to acquire re-infection by resistant strains of HIV [5] or acquiring other sexually transmitted infections (STIs) which hasten AIDS progression [6]. Furthermore, as more and more people with HIV live longer and healthier lives because of antiretroviral therapy (ART), an increasing number of sexual transmissions of HIV may arise from these people living with HIV/AIDS (PLWHA) [7]. Moreover, PLWHAs on ART may perceive the chances of transmitting HIV as being less frequent after initiation of ART [6]. It is noteworthy that PLWHA who receive ART and who engage in unsafe sexual behaviour may harbor and spread drug-resistant HIV, which constitutes a considerable public threat [8].

Data by NACO [9] shows the trends in various sub-groups of population at national level, but information related to other aspects of socio-demographic profile of patients for individual districts is lacking, which needs to be gathered by respective States Aids Control Societies (SACS) and analysed to develop strategies effective at local level.

Although several surveys [10] have examined the magnitude of risky sexual behaviours among general population but limited studies are available in the context of high-risk sexual behaviour among PLHA. Understanding the magnitude and predictors of such high-risk sexual behaviour remains a priority as this information will inform efforts to include prevention with positive messages in the routine HIV/AIDS care and treatment. With the above backdrop a study was conducted in Anti-retroviral therapy (ART) centre of Calcutta School of Tropical Medicine (CSTM) among adult male people living with HIV/AIDS, with the aim of finding out the Socio Demographic status, behavioural pattern, morbidities among male People living with HIV/AIDS (PLHA) attending Anti Retro Viral Therapy (ART) Centre of Calcutta School of Tropical Medicine (CSTM), Kolkata, India.

METHODOLOGY

This institution based Observational cross-sectional study was conducted among People living with HIV/AIDS (PLHA) attending Anti Retro Viral Therapy (ART) Centre of Calcutta School of Tropical Medicine (CSTM) for 12 months from May 2012 to April 2013. All male (>15 years) people living with HIV/AIDS newly registered in the year 2012-'13 at ART centre and giving consent to participate except those who were severely morbid to answer the schedule were included.

Target study population size was obtained from taking average of previous 3 years records of total number of male PLHA registered at CSTM (n=620) and taking 1/3rd of that (as 2 days in a week were allotted for work by simple random sampling without replacement), the study population came as 207. Further taking 5% as non-response; final target study

population came as 217. Ultimately, 220 male (>15 years) living with HIV/AIDS were taken.

Tools for the study were Schedule, consisted of 2 parts. First part – to elicit information pertaining to demographic, socio-economic status of the study population, and second part – to elicit high risk behaviour among PLHA [obtained from behavioural surveillance survey 2006] which was pre-designed and pre-tested

Behavioural pattern

Coital debut, Monogamous relationship, First sexual partner, Sex with non-regular sex partner (NRSP) in 1 year recall, Use of condom in last sex with NRSP, Consistent condom use with NRSP, Correct knowledge about condom use, Sex with Commercial Sex Worker (CSW) etc.

DATA COLLECTION

Male (>15 years) people living with HIV/AIDS (PLHA) attending ART centre and Newly registered at ART centre were interviewed once, after being attended by medical officer at ART centre.

Ethical issues

Ethical clearance from Institution Ethics committee was obtained from All India Institute of Hygiene & Public Health (AIIPH), Kolkata. Informed written consent was taken from each participant and complete anonymity and confidentiality of each participant were ensured. Each study participants was informed that the data obtained from this research would be used only for academic purpose and he was ensured that he would not suffer from any form of hardship, discrimination or stigmatization as a consequence of having participation in this research work.

DATA ANALYSIS AND INTERPRETATION

Data analysis was done using MS excel and SPSS version 20.0. Descriptive statistics were described about demographic, socio-economic status, behavioural characteristics and associated morbidities.

RESULTS

Table no. 1: Maximum population (40.5%) belong to the age group 31-40 years followed by 24.1% in 41-50 and least (0.9%) belonged to the geriatric age group > 60 years. Most of them were Hindu (80%), 17.3% were Muslim; half were general (51.1%), 22.2% Scheduled caste among Hindus. Majority of the study population (44.5%) belonged to upper lower social class, 30.5% in lower middle class as per modified Prasad scale 2012. Majority of the study population (28.6%) were educated upto secondary, 23.2% primary level. Majority of the study population were married (47.7%), 31.8% were unmarried. Most of the study population (79.5%) belong to nuclear family. Majority of the study population were unskilled worker (26.4%) by occupation, 19.5% were unemployed. Majority

(46%) of the study population (who were married) having 3 dependants (36.8%).
 has 2 children. Majority of the study population were

Table-1: Distribution of study population according to socio-demographic characteristics: (n=220)

Characteristics	Frequency (%)
Age group (years)	
16-20	8(3.6)
21-30	42(19.1)
31-40	89(40.5)
41-50	53(24.1)
51-60	26(11.8)
>60	2(0.9)
Religion	
Hindu	176 (80.0)
Muslim	38 (17.3)
Christian	5 (2.3)
Buddhist	1 (0.5)
Social Caste	
General	90 (51.1)
Scheduled caste	39 (22.2)
Scheduled tribe	35 (19.9)
Other backward class	12 (6.9)
Education	
Illiterate	13 (5.9)
Non-formally literate	19 (8.6)
Primary	24 (10.9)
Middle	51 (23.2)
Secondary	63 (28.6)
Higher Secondary	35 (15.9)
Graduate	12 (5.5)
Post-Graduate	3 (1.4)
Occupation	
Unemployed	43 (19.5)
Unskilled worker	58 (26.4)
Semiskilled worker	29 (13.2)
Skilled worker	6 (2.7)
Service	36 (16.4)
Business	45 (20.5)
Professional	3 (1.4)
Marital status	
Married	105 (47.7)
Unmarried	70 (31.8)
Widower	8 (3.6)
Divorced	25 (11.4)
Separated	12 (5.5)
Number of children in the family	
0	16 (10.7)
1	18 (12.0)
2	69 (46.0)
3	41 (27.3)
≥4	6 (4.0)
Number of dependents in the family*	
0	25 (11.4)
1	23 (10.5)
2	79 (35.9)
3	81 (36.8)
4	9 (4.1)
5	3 (1.4)
Type of Family	
Nuclear	175 (79.5)
Joint	45 (20.5)
Socio-economic class as per modified Prasad scale 2012	
Lower (PCI Rs. ≤584)	14 (6.4)
Upper lower (PCI Rs. 585-1169)	98 (44.5)
Lower middle (PCI Rs. 1170-1949)	67 (30.5)
Upper middle (PCI Rs. 1950-3899)	33 (15.0)
Upper (PCI Rs. ≥ 3900)	8 (3.6)
Total	220 (100.0)

(*Unmarried patients were excluded, n=150)

Table no. 2: Majority of the study population had coital debut at the age of 26-30 years (35.9%). First sexual partner among the male PLHA was female commercial sex worker (41.7%). Majority of the participants were not into the monogamous relationship (74.4%). Participants who were not into the monogamous relationship, 54.14% of them had sex with non-regular sexual partner (NRSP) in last one year, 21.65 % of above had used condom during sex with NRSP. Those who used condom during sex with NRSP, majority (65.31%) of them used it on last occasion of sex with NRSP. 80% of the study population ever had sex with CSW, majority of them visited >1 month back (21.6%), with maximum frequency being >=1/ month (43.2%).

Table no. 3: Majority of the study population (51.1%) were currently sexually active and 55.36 % of currently sexually active participant consistently used condom. More than half of the study population (55.90%) didn't know properly how to use condom.

Majority of the study population (93.2%) had condom access within 30 minutes from home and majority accessed it from medical shop (88.3%). Those who received IV drugs donated or received blood 50% of them shared needles, syringes, razor, and blades.

Table No.4 showed that majority of the study population suffered from tuberculosis (28.2%) followed by candidiasis (24.5%), diarrhoea (16.8%), least (3.2%) was Sexually transmitted disease.

Table-2: Pattern of Past sexual practice by the study population

Pattern of Past sexual practice	Number (Percentage) n (%)
Age (in years) of first sexual act (n=211)*	
16-20 years	54 (24.5)
21-25 years	55 (25.0)
26-30 years	79 (35.9)
31-35 years	23 (10.5)
Total	211(100)
First sexual partner (n=211)*	
Commercial female sex worker	88 (41.7)
Girlfriend	37 (17.5)
Wife	86 (40.8)
Monogamous Relationship (n=211)	
Yes	54 (25.6)
No	157 (74.4)
Sex with non-regular partner in 1 year (n=157)	
Yes	85 (54.14)
No	72 (45.86)
Condom use with non-regular sexual partner (n=85)	
Sometimes	34 (40.0)
Never	51 (60.0)
Condom use in last sex with non-regular sexual partner(n=34)	
Yes	22 (65.31)
No	12 (34.69)
Sex with CSW ever (n=211)*	
Yes	146 (69.19)
No	65 (30.81)
Date of last visit (n=146)	
1 week back	10 (6.8)
2 week back	25 (17.12)
1 month back	23 (15.75)
6 month back	30 (20.55)
1 year back	15 (10.27)
>1 year back	43 (29.45)

*9 persons did not have any sexual exposure

Table-3: Pattern of Current Sexual Behavioural practice by the study population (n=220)

Pattern of Current Sexual Behavioural practice	Number (Percentage) n (%)
Currently sexually active (n= 220)	
Yes	112 (51.1)
No	99 (45.0)
Never had sex	9 (4.0)
knowledge of correct use of condom (n= 220)	
Yes	97 (44.1)
No	123 (55.9)
Access within 30 minutes of reach (n=220)	
Yes	205 (93.2)
No	15 (6.8)
Place of condom access within the locality (n=205)	
Medical shop	181 (88.3)
Pan shop	14 (6.8)
Dispensary	10 (4.8)
Consistent condom use (n=112)	
Yes	62 (55.4)
No	50 (44.6)
Ever used IV drugs/received/donated blood (n=220)	
Yes	74 (33.6)
No	146 (66.4)
Shared needles, syringes, razor, blades(n=74)	
Yes	37 (50.0)
No	37 (50.0)

Table-4: Distribution of the study population according to clinical manifestation au the time of survey (n=220) (* not mutually exclusive)

Clinical manifestation	Number (Percentage) n (%)
More than 10% weight loss in 1 month	29 (13.2)
Diarrhoea	37 (16.8)
Fever	25 (11.4)
Pulmonary/extra pulmonary tuberculosis	62 (28.2)
Candidiasis	54 (24.5)
Pneumonia	8 (3.6)
Persistent glandular lymphadenopathy	10 (4.5)
Sexually transmitted disease	7 (3.2)

DISCUSSION

Present study reported maximum respondents belonged to the age group 31-40, which is same as reported by Opara *et al.* in Uyo, South Eastern, Nigeria [11] but sharply in contrast to the fact reported by Bangladesh BSS, which reported maximum PLHA belonged to age group 20-29 [12] whereas BSS done at India reported the age group as 25-39 years [13, 14]. Majority of the study population were currently married (47.7%), which is in conformity with BSS done by NACO.

In this study, majority were Hindu (80%) by religion. Majority of the study population were general (51.1%) among hindus, belong to the upper lower social class as per modified Prasad scale 2012 and 28.6% of the PLHA were educated upto secondary, belong to nuclear family.(79.5%), were married and were unskilled worker by occupation (26.4%). Those who were married, 46% of them have 2 children. Majority of

the study population were having 3 dependants (36.8%).

On the contrary, BSS done in Bangladesh [12] found pre-dominantly Muslim population, more than half (59.0%) of the respondents had monthly family expenditure of Tk. 5000 or less. Three-fourths of the respondents were from four professional categories (general service, business, farming, and transportation worker). Majority in BSS 2006 were reported literate (76%) and consisted of currently married respondents (71%).

Behavioural pattern

In this study, majority of the study population (35.9%) had coital debut at the age of 26-30 years. First sexual partner among the male PLHA was female commercial sex worker (41.7%). Majority of the BSS [12] and Taraphdar *et al.* [15] reported coital debut below or at 19 years of age. The apparent discrepancy in the current study may be ascribed to the fact that

being an institution based study this may not be true representative of the general population, as in case of community based study. There may be conscious falsification of data by the participants as they were counselled and educated about delay sexual debut by the counsellor at ART centre before filling up this schedule by the researcher.

In the present study majority (74.4%) of the study population were not into the monogamous relationship, which is similar to findings found in BSS of member countries of SEAR except in Thailand [16], which reported the monogamous status as majority (75%). This anomaly is due to the fact that BSS was conducted among the general population whereas the study population in present research was male PLHA registered at ART centre.

Though BSS of India [13, 14] showed only 6% of the respondents had sex with non-regular sexual partner (NRSP) in last 12 months, present study found it to be nearly 40% (54.14% of 74.4%), 21.65 % of above had used condom during sex with NRSP. This huge difference existed due to the selection of study population in two different research work; in one general population was considered, whereas in the counterpart newly registered PLHA at ART of CSTM was taken.

Majority of the study population (55.90%) didn't know correctly how to use condom, this was in spite of the fact that, they were counselled by the appropriate person on repeated occasion at ART centre. This necessitates further education by the peer educators and appropriate BCC strategy to promote consistent condom use among PLHA.

Those who were currently sexually active 55% of them consistently used condom, in contrast BSS at Singapore [17] showed only 22% of currently sexually active high risk population consistently used condom. Here also two different study populations can be cited as possible explanation. Further repeated counselling by the counsellor in the present study setting might increase the consistent condom use among male PLHA.

Regarding availability of condom, current study reported majority (93.2%) had condom access within 30 minutes from home and maximum availability was from medical shop, which is also confirmed from Bhutan's study on sexual behaviour and networks in Thimpu. [18] It is noteworthy though condom availability and accessibility was high in the society, consistent condom seeking and usage among PLHA was lacking, reflecting more education, support and enabling environment is necessary to change their behaviour in this regard.

Morbidity pattern-In this study, majority of the study population suffered from tuberculosis (28.2%) and candidiasis (24.5%). This study finding matched with findings reported in other studies done elsewhere by J Chakraborty [19], Mulla SA [20], Kumar S [21], Madkar SS [22], Takalkar [23]. Another study by Naba MR [24] found incidence of AIDS Defining Illnesses (ADIs) was 72%. The most commonly diagnosed Opportunistic Infections (OIs) were cerebral toxoplasmosis (21%), followed by fungal infections (17%).

Conclusion and recommendations

IEC activities to promote value based lifestyle with reducing vulnerabilities among PLHA focusing on reduction of risky behaviour (sharing needles, syringes and avoiding reuse) and routinizing the use of condom as a prophylaxis against STI and HIV load. PLHA should be trained on safe sex strategy and correct use of condom among PLHA as well as among their partner. As majority of the study population's first sexual partner was CSW, so correct and consistent condom use as well as maintaining monogamous relationship should be promoted and reinforced through counsellor at ART centre and Community Care Centre, Peer educator among PLHA. Again, majority of the PLHA were suffering from Candidiasis and Tuberculosis, appropriate referral of PLHA to RNTCP and counselling them about adherence to DOTS therapy as well as ART is essential. More involvement of Community Care centre to reinforce, care and counselling, support of PLHA against Opportunistic infection will reduce their poor health burden.

Acknowledgement

The authors express their sincere gratitude towards all the study participants for their co-operation.

Source of funding

No funding was received from any agency to conduct this study.

Conflicts of interest

Authors declare No conflict of interest.

Ethical approval

The study was approved by the Institutional Ethics Committee (AIH&PH, Kolkata).

REFERENCES

1. WHO | HIV/AIDS: HIV/AIDS. Global Situation and Trends; 2013. Available from: <http://www.who.int/gho/hiv/en/>. [Last accessed on 2014 October 10].
2. National AIDS Control Organisation. NACO Annual Report; 2013-14. Available from: http://www.naco.gov.in/upload/2014%20mslns/NACO_English%20-2013-14.pdf. [Last accessed on 2015 January 23].

3. National AIDS Control Organisation (NACO). Department of AIDS Control, Ministry of Health and Family Welfare Annual Report; 2011.
4. Kalichman SC. HIV transmission risk behaviors of men and women living with HIV-AIDS: Prevalence, predictors and emerging clinical interventions. *Clin Psychol Sci Pract.* 2000; 7: 32-47.
5. UNAIDS Report on the Global AIDS Epidemic; 2013. Available From: http://www.unaids.org/sites/default/files/media_asset/UNAIDS_Global_Report_2013_en_1.pdf. [Last accessed on 2014 November 04].
6. Wilson TE, Gore ME, Greenblatt R, Cohen M, Minkoff H, Silver S, et al. Changes in sexual behavior among HIV-infected women after initiation of HAART. *Am J Public Health.* 2004; 94: 1141-6.
7. Vittinghoff E, Scheer S, O'Malley P, Colfax G, Holmberg SD, Buchbinder SP. Combination antiretroviral therapy and recent declines in AIDS incidence and mortality. *J Infect Dis.* 1999; 179: 717-20.
8. Eisele TP, Mathews C, Chopra M, Brown L, Silvestre E, Daries V, et al. High levels of risk behavior among people living with HIV Initiating and waiting to start antiretroviral therapy in Cape Town South Africa. *AIDS Behav.* 2008; 12: 570-7.
9. NACO, Annual Report 2010-11. Ministry of Health and Family Welfare, Govt. of India. New Delhi, 2011, p.106
10. Mhalu A, Leyna GH, Mmbaga EJ. Risky behaviours among young people living with HIV attending care and treatment clinics in Dar Es Salaam, Tanzania: Implications for prevention with a positive approach. *J Int AIDS Soc.* 2013; 16: 17342.
11. Opara DC, Umoh IB, John M. Socio-Demographic and Anthropometric Variables of Persons Living with HIV and AIDS in Uyo, South Eastern Nigeria. *Pakistan Journal of Nutrition.* 2007; 6 (6): 547-557.
12. Chowdhury ME, Anwar I, Alam N, Ahmed A, Mallick PS, Dasgupta S, Mridha MK, Bashir I, Streatfield PK. Assessment of Sexual Behaviour of Men in Bangladesh :A Methodological Experiment. Dhaka. *Family Health International.* 2006, September. 55p.
13. India. National behavioural surveillance survey: General Population. NACO, MOHFW, Government of India. 2006. 159p.
14. India. National behavioural surveillance survey: Men who have Sex with Men (MSM) and Injecting Drug Users (IDUs). . NACO, MOHFW, Government of India. 2006. 110p.
15. Taraphdar P, Dasgupta A, Saha B. Coital Debut of People Living With HIV/AIDS Attending School of Tropical Medicine, Kolkata. *Indian Journal of Public Health* 2009; 53 (4): 240-242.
16. Chamrathirong A, Kittisuksathit S, Podhisita C, Isarabhakdi P, Sabaaying M. National Sexual behaviour survey of Thailand. Institute for Population and Social Research, Mahidol University, 2007. 110p. report no.338
17. Singapore, National Behavioural Surveillance Survey on HIV/AIDS among the General Population, Government of Singapore, 2007, 13p.
18. Bhutan, Sexual Behaviors and Networks in Thimphu, Bhutan: A Rapid Assessment, Thimpu: Centre for Global Public Health (CGPH), University of Manitoba, Canada, 2010, 42p.
19. Chakravarty J, Mehta H, Parekh A, Attili SVS, Agrawal NR, Singh SP, Sundar S. Study on Clinico-epidemiological Profile of HIV Patients in Eastern India. *JAPI.* 2006; 54: 854-57.
20. Mulla SA, Patel MG, Vaghela G, Motala N, Desai V, Shrivastava RK, A Study of Opportunistic infection in HIV-seropositive patients . *Indian Journal of Community Medicine.* 2007; 32 (3): 208-209.
21. Kumar S, Wanchu A, Abeygunasekara N, Sharma A, Singh S, Varma S. Profile of Presentation of Human Immunodeficiency Virus Infection in North India, 2003-2007. *Indian Journal of Community Medicine.* 2012, 37 (3): 159-164.
22. Madkar SS, Vankudre AJ, Nilekar SL. Spectrum of Opportunistic Infections in HIV-AIDS patients. *Indian Journal of Commmunity Health.* 2012, 24 (3): 184-187.
23. Takalkar AA, Saiprasad GS, Prasad VG, Madhekar NS. Study of Opportunistic Infections in HIV Seropositive Patients Admitted to Community Care centre (CCC), KIMS Narketpally. *Biomedical Research.* 2012; 23 (1):139-142.
24. Naba MR, Kanafani ZA, Awar GN, Kanj SS. Profile of opportunistic infections in HIV-infected patients at a tertiary care center in Lebanon. *J Infect Public Health.* 2010; 3(3):130-3.